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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 22461-2008

Replacing GB/T 22461-2008

**Surface chemical analysis - Vocabulary - Part 1: General terms
and terms used in spectroscopy
(English Translation)**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

This document is Part 1 of GB/T 22461 "Glossary of Surface Chemical Analysis". GB/T 22461 has published the following parts.

---Part 1: General terms and spectroscopic terms;

---Part 2: Scanning probe microscopy terminology.

This document replaces GB/T 22461-2008 "Surface Chemical Analysis Vocabulary". Compared with GB/T 22461-2008, except for structural adjustments in addition to editorial changes, the main technical changes are as follows.

---Changed the definitions or annotations of 45 terms, see NA.1 of Appendix NA;

---Added 9 terms to Chapter 5 "Terms and Definitions of Surface Analysis Methods", see

NA.2(1~9) for details;

---171 terms have been added to Chapter 6 "Surface Analysis Terms and Definitions", see NA.2 (10~180) for details;

---Added Chapter 7 "Terms and Definitions of Multivariate Analysis", Chapter 8 "Supplementary Terms and Definitions of Surface Analysis Methods", Chapter 9 "Surface Additional terms and definitions for analysis" and Chapter 10 "Additional terms and definitions for multivariate analysis", these 4 chapters have a total of 83 new terms and definitions.

Article, see NA.2 (181~263).

This document is equivalent to ISO 18115:2013 "Glossary of Surface Chemical Analysis Part 1: General Terms and Spectroscopy Terminology".

This document adds a chapter "Normative References". Compared with ISO 18115:2013, this document has made the following structural adjustments.

---Chapter 1 corresponds to Chapter 0 of ISO 18115:2013;

---Chapter 3 ~ Chapter 10 respectively correspond to Chapter 1 ~ Chapter 8 of ISO 18115:2013.

This document has made the following minimal editorial changes.

---Added two explanatory clauses "Chinese terminology of analytical methods" (4.4) and "English equivalents" (4.5);

---Added Appendix NA (informative);

---Index added.

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Introduction

Surface chemical analysis is an important field that involves interaction between people from different fields and with different backgrounds. engage in superficial Chemical analysts may be materials scientists, chemists, or physicists, and their research background may be experimental or theoretical. Use surface chemistry the data includes not only the above-mentioned people, but also people from other disciplines.

Through existing surface chemical analysis technology, composition information from areas close to the surface (generally within 20 nm) can be obtained. Follow by peeling off the surface layer, the composition information changes with depth can also be obtained.

A wide range of academic fields and usage in different regions lead to different

interpretations of the term, and the same concept will be described in different terms.

narrate. In order to avoid misunderstandings and facilitate the exchange of information, it is necessary to clarify concepts, formulate and revise relevant standards, and standardize the use of correct the term.

GB/T 22461 "Surface Chemical Analysis Vocabulary" consists of two parts.

---Part 1: General terms and spectroscopic terms. Covers terms such as electron spectroscopy, mass spectrometry, and spectroscopy and X-ray analysis.

---Part 2: Scanning probe microscopy terminology. Covers terminology related to scanning probe microscopy.

Part 1 of GB/T 22461, which is this document, contains surface analysis vocabulary that has been expanded from electron spectroscopy and mass spectrometry to spectroscopy and X-ray line analysis. The vocabulary in Part 2 of GB/T 22461 is the content of scanning probe microscopy, involving matters originating from nuclear physics and radiation science.

to techniques and concepts in a wide range of fields including physical chemistry and optics.

Surface Chemical Analysis Glossary Part 1: General terminology and genealogical terminology

1 Scope

This document defines general terminology in surface chemical analysis and terminology in the field of spectroscopy. Appendix A provides some general terms for non-surface analysis specialties.

Commonly used terms.

2 Normative reference documents

This document has no normative references.

3 Abbreviations

The following abbreviations apply to this document.

AC alternating current (alternatingcurrent) DC direct current (directcurrent) eV electronvolts